

## **1,4-dioxane on Long Island**

### **1/19/17**

As part of the Unregulated Contaminant Monitoring Rule (UCMR) 3 sampling conducted between 2013 and 2015, 1,4-dioxane has been detected at levels exceeding EPA's Health Advisory level of 0.35 parts per billion (ppb) in 27 drinking water utilities that serve communities on Long Island. The following summary table lists those public water systems and the range of 1,4-dioxane detected:

<b><u>Drinking Water Utility</u></b>	<b><u>1,4-dioxane</u> <u>(parts per</u> <u>billion)</u></b>
Albertson Water District	.39 -.94
Aqua NY, Inc.	.95 -1.35
Bethpage Water District	.87 - 8.5
Dix Hills Water District	0.46 - 1.3
Franklin Square Water District	1.3 - 1.5
Garden City Park Water District	0.37 - 3.9
Greenlawn Water District	0.35 - 1.6
Hicksville Water District	0.45 - 5.6
Jericho Water District	0.35 - 3.5
Locust Valley WD	0.36 - 0.90
Long Island American Water Corporation	0.41 - 0.92
Manhasset Lakeville Water District	0.36 - 0.68
Plainview Water District	0.67 - 5.8
Port Washington Water District	0.40 - 2.0
Roslyn Water District	0.73 - 0.86
Saint James Water District	0.47
Smithtown Water District	0.39
South Farmingdale Water District	0.45 - 1.3
South Huntington Water District	0.47 - 1.0
Suffolk County Water Authority	0.35 - 4.34
Town of Hempstead Water District	0.48 - 10.0
Village of Garden City	0.78 - 3.9
Village of Hempstead	4.0 - 4.5
Village of Mineola	0.39 - 0.65
Water Authority of Great Neck North	0.57 - 1.24
Water Authority of Western Nassau	0.47 - 10.0
Westbury Water District	0.36 - 1.1

Attached is a spreadsheet including the most recent sampling data for all UCMR3 contaminants that exceeded health advisories and the drinking water utilities' most recent Consumer Confidence Reports (CCRs).

## **What is 1,4-dioxane?**

1,4-dioxane is used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos. 1,4-dioxane is a likely human carcinogen and has been found in groundwater at sites throughout the United States. The physical and chemical properties and behavior of 1,4-dioxane create challenges for its characterization and treatment. It is highly mobile and has not been shown to readily biodegrade in the environment. For more information on 1,4-dioxane, a Technical Fact Sheet is available at the following URL: [https://www.epa.gov/sites/production/files/2014-03/documents/ffrro\\_factsheet\\_contaminant\\_14-dioxane\\_january2014\\_final.pdf](https://www.epa.gov/sites/production/files/2014-03/documents/ffrro_factsheet_contaminant_14-dioxane_january2014_final.pdf)

## **Risks Associated with 1,4-dioxane**

The concentration of 1,4-dioxane in water that corresponds to an estimated lifetime cancer risk of 1 in a million ( $10^{-6}$  lifetime risk) is 0.35 parts per billion, and additional information on this topic can be found at the following URL:

[https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance\\_nmbr=326](https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=326)

## **UCMR3 Contaminants in Drinking Water**

1, 4-dioxane is one of the contaminants evaluated as part of UCMR3. This rule requires certain drinking water systems to collect occurrence data for contaminants that are suspected to be present in drinking water but that do not, as yet, have specific health-based standards promulgated (referred to as “unregulated” contaminants) per the Safe Drinking Water Act (SDWA). Data was collected during a 12-month period between 2013 to 2015.

## **UCMR3 Contaminant Response**

If water sampling results indicate that drinking water contains UCMR3 contaminants at levels greater than health advisory levels, EPA recommends that water systems quickly undertake additional sampling to verify the level, scope, and localized source of contamination. If follow-up sampling confirms the presence of UCMR3 contaminants at levels above the health advisory level, drinking water systems and public health officials should promptly provide consumers with information about the levels in their drinking water. In addition, the notification should include actions they are taking and identify options that consumers may consider to reduce risk such as seeking an alternative drinking water sources.

The Safe Drinking Water Act requires EPA to establish and enforce standards and regulations that public drinking water systems must follow. EPA delegates primacy for public water systems to states if they meet certain requirements. As you know, NYSDOH has primacy for the implementation and enforcement of drinking water regulations, while EPA has the responsibility to oversee NYSDOH’s work. NYSDOH must work with drinking water utilities to address and reduce levels of UCMR contaminants.

Drinking water systems must take steps to reduce consumer exposure to 1,4-dioxane. In some cases, drinking water systems can reduce concentrations of 1,4-dioxane by closing contaminated wells or changing rates of blending of water sources. Drinking water may be treated through the use of advanced oxidation technologies. Pump-and-treat remediation can treat dissolved 1,4-dioxane in groundwater and control groundwater plume migration, but requires ex situ treatment.

New York State receives or has access to UCMR3 sampling results through the Safe Drinking Water Accession and Review System (SDWARS), which contains UCMR3 monitoring results report for public water systems serving more than 10,000 people. New York was also sent a copy of sampling results for the small public water systems at the same time the results were mailed to the small public water systems. Finally, New York can access the National Contaminant Occurrence database that contains the data collected in the unregulated contaminant monitoring program. The database is accessible at <https://www.epa.gov/dwucmr/national-contaminant-occurrence-databse-ncod>. The database is supplemented and corrected, as needed, over the course of each reporting cycle, following further review by the analytical laboratories, the public water systems, the states and the EPA. In addition, in July 2016, EPA sent NYSDOH a list of all public water systems that exceeded health advisories for contaminants measured as part of UCMR3.

EPA Region 2 staff will be meeting in Albany with NYSDOH staff on January 26, 2017 to discuss oversight of the drinking water program and what steps NYSDOH is taking to address the reduction of UCMR contaminants in drinking water.